RE-THINKING RESILIENCY

Lessons Learned in the Developing World

Talbot Brooks
NGAC Meeting
April 4, 2018


E
HTO
LE BOIVIER

UNDERSTANDING RISK

- FEMA - Risk = AV x T x V
  - Asset value
    - Can be economic, emotional/symbolic, etc…
  - Threat is the probability of occurrence and related intensity/scope
  - Vulnerability is a measure of how exposed a resource/entity is to some degree of loss
- Talbot - Risk is the degree to which a people are willing to suffer negative consequence associated with a disaster

WHAT IS RESILIENCE?

- PPD-21 defines resilience as the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.
- Rand defines community resilience as a measure of the sustained ability of a community to utilize available resources to respond to, withstand, and recover from adverse situations.
- CCLI defines resilience as the ability to anticipate risk, limit impact, and bounce back rapidly through survival, adaptability, evolution, and growth in the face of turbulent change.
- Talbot: the degree to which a people may to adapt or cope with shocks and/or stresses.

RISK AND RESILIENCE

- Both are subjective
- Both exist on a continuum related to societal norms
- Both are comprised are similarly related to temporal and spatial extent and event intensity.

CURRENT U.S. APPROACH

- Resilience, as traditionally practiced, is largely based on threat reduction
  - Heavily implies an additive process by which an entity is hardened to prevent wide-spread negative consequences.
    - Building hurricane resistant buildings, higher levees, and tougher infrastructure
    - Improving emergency responder capacity and capabilities
- A preponderance of resources and efforts are focused through DHS and related emergency management agencies
  - DHS is largely shouldering the resource burden associated with resilience and thus impact on improving resilience is limited

THE DEVELOPING WORLD

- Extremely limited national/regional resources
- Rapidly growing economies and unprecedented growth in the absence of cohesive plans and policies
- Experiencing rapid urbanization
- Extremely fragile

FLIPPING THE APPROACH

- Efforts focus on the reduction of vulnerability
- Whole government planning and delivery – multi-agency and multi-branch approaches
- Promotion of minimizing exposure to risk

EXAMPLES

- Mozambique:
  - Hard-line electric augmented with local solar
  - Pre-distribute life preservers instead of building a bigger levee
  - Well water on demand and large water storage systems
- Vietnam and Laos:
  - Promotes the continuance of locally grown and distributed foodstuffs backed by robust national stores and distribution capacity
- Nepal:
  - Massive cross-training among the responder community

LESSONS LEARNED

- A centralized disaster management system becomes more effective with agency partners committed to investment of resources and coordinated policy
- Honest communication between government and the public sets realistic expectations
  - Public is far more engaged (think Japan level civic engagement but centered on the family unit)
- Government goes to the people instead of expecting the people to come to the government.
- Protection of economy is a priority (less tolerance to risk and higher expectation for resiliency)

LESSONS LEARNED

- Realization of the incredible (ridiculous?) level of expectations held in the U.S.
  - and how that value judgement has skewed investment/expenditure of resources…
- System complexity/maturity is an as-of-yet unassessed major component of resilience.

GEOSPATIAL DIMENSIONS

- Re-assessment of data requirements based on a resilience perspective focusing on lessening vulnerability rather than hardening against a threat
- Evaluation and investment in social models/dimensions (example: Social Vulnerability Index)
- Greater cross-agency/multi-agency responsibility for data and data dissemination (can't just be DHS managing 600+ layers to create the COP)